

In the claims:

1. (Currently Amended) A surgical system, comprising:

a surgical robot for manipulating a surgical tool to a surgical site with precise positioning during a surgical procedure;

an attachment member configured and dimensioned to mount attach the surgical robot on to a bone associated with said surgical site; and

a controller programmed prior to said surgical procedure to direct the robot to position the surgical tool at the surgical site; and

~~wherein said robot comprises at least 3 actuators mounted on a base member, said actuator being configured for at least translational or rotational movement.~~

2. (Original) The surgical system according to claim 1, wherein said robot comprises:

a base member;

at least four actuators extending outward from the base member at fixed angles, said actuators being arranged in cooperating pairs, said pairs together defining a spherical joint at cooperating ends opposite the base member, and

a surgical tool held by said spherical joints.

3. (Original) The surgical system according to claim 2, wherein said surgical tool comprises at least one of a tool guide, a cutting member and a drilling member.

4. (Original) The surgical system according to claim 2, wherein said actuators define a longitudinal axis and are configured to provide only translational movement along said axis.

5. (Original) The surgical system according to claim 2, wherein surgical site lies at least approximately within a defined plane and said surgical robot is configured and dimensioned such that said base member is at least approximately perpendicular to said defined plane.

6. (Original) The surgical system according to claim 1, wherein said robot comprises a miniature parallel robot.

8. (Original) The surgical system according to claim 1, wherein said attachment member comprises a robot receiving adaptor mounted on a bone attachment portion.

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9. (Original) The surgical system according to claim 8, wherein said bone attachment portion comprises a clamp having at least two jaws shaped to mate with a specific bone configuration.

10. (Original) The surgical system according to claim 8, wherein said bone attachment portion comprises at least one wire configured and dimensioned to be received in bone holes.

11. (Original) The surgical system according to claim 1, wherein said controller comprises a cpu and user interface communicating with said robot, said cpu containing a program for guiding the robot based on data generated from surgical site images.

12. (Original) The surgical system according to claim 11, wherein said surgical site images are created prior to each surgical procedure requiring a new location for the support member.

13. (Currently Amended) A surgical system for facilitating a surgical procedure at a surgical site, comprising:

a surgical robot including a base member; two pairs of actuators extending outward from the base member at fixed angles, wherein said actuators each have first and second ends, said first ends of a pair being spaced apart on said base member and said second ends of a pair coming together to define a tool holding element;

an attachment member removably securable to the robot base member and configured and dimensioned to mount ~~attach~~ the surgical robot on ~~to~~ a bone associated with said surgical site; and

a controller including a cpu and user interface communicating with said robot, said cpu containing a program for guiding the robot based on data generated from surgical site images created prior to said surgical procedure.

14-32. (Withdrawn)

33. (Previously Added) The surgical system of claim 1, wherein said controller is further programmed to locate said surgical robot with respect to a patient anatomy based on at least one three dimensional patient image and at least one further patient image including said attachment member in said further image.

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34. (Previously Added) The surgical system of claim 33, wherein said controller is further programmed with instructions for execution of a surgical plan based on said determined surgical robot location.

35. (Previously Added) The surgical system of claim 1, wherein said controller is further programmed with instructions for registering said surgical robot positionally with at least one pre operative three dimensional image of a patient.

45. (Reinstated - formerly claim # 7) A surgical system of claim 1, wherein said robot comprises at least 3 actuators mounted on a base member, said actuator being configured for at least translational or rotational movement.

46. (Reinstated - formerly claim #36 and Currently Amended) A surgical system, comprising:

a surgical robot for manipulating a surgical tool to a surgical site with precise positioning during a surgical procedure;

an attachment member comprising a bone attachment portion configured for mounting on attachment to a patient bone, and a robot receiving portion mounted on said bone attachment portions, wherein said robot receiving portion is alignable on said bone attachment portion to provide a robot receiving surface of a selected orientation; and

a controller programmed to locate said surgical robot with respect to a patient anatomy.

47. (Reinstated - formerly claim #37 and Currently Amended) The surgical system of claim 36 46, wherein a selected orientation of said robot receiving surface is horizontal.

48. (Reinstated - formerly claim #38 and Currently Amended) The surgical system of claim 36 46, wherein said controller is further programmed with instructions for execution of a surgical plan based on said determined surgical robot location.

49. (Reinstated - formerly claim #39 and Currently Amended) The surgical system of claim 36 46, wherein said controller is further programmed with instructions for registering said surgical robot positionally with at least one pre operative three dimensional image of a patient.

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50. (Reinstated - formerly claim #40 and Currently Amended) The surgical system of claim 36 46, wherein said bone attachment portion includes at least one substantially spherical mating surface for mating with the robot receiving portion, and wherein said substantially spherical mating surface provides a selectable range of orientation for said clamp adapter.

51. (Reinstated - formerly claim #41 and Currently Amended) The surgical system of claim 36 46, wherein said bone attachment portion of said attachment member includes first and second opposing clamp jaws configured to clamp onto a bone of a patient.

52. (Reinstated - formerly claim #42 and Currently Amended) The surgical system of claim 41 51, wherein said bone attachment portion further comprises first and second locking assemblies.

53. (Reinstated - formerly claim #43 and Currently Amended) The surgical system of claim 42 52, wherein said first locking assembly comprises:

- a first lever pivotally mounted on the first jaw;
- a second lever pivotally mounted on the second jaw; and
- a pivot interconnecting said first lever and said second lever.

54. (Reinstated - formerly claim #44 and Currently Amended) The surgical system of claim 42 52, wherein said second locking assembly comprises:

- a first threaded stud coupled with said first lever and extending to receive said robot receiving portion;

- a second threaded stud coupled with said second lever and extending to receive said robot receiving portion; and

- nuts received on said first and second threaded studs for coupling said bone attachment portion with said robot receiving portion.

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